



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/829,969	04/11/2001	Kazuhiro Ohnishi	5000.40010X00	8254

20457 7590 02/10/2003

ANTONELLI TERRY STOUT AND KRAUS  
SUITE 1800  
1300 NORTH SEVENTEENTH STREET  
ARLINGTON, VA 22209

EXAMINER

TRAN, MAI HUONG C

ART UNIT PAPER NUMBER

2818

DATE MAILED: 02/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/829,969

Applicant(s)

OHNISHI ET AL.

Examiner

Mai-Huong Tran

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 9-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 17-40 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-4 and 17-21 are rejected under 35 U. S. C. § 102 (e) as being anticipated by U.S. Patent No. 6,291,868 to Weimer et al.

Regarding to claim 1, Weimer discloses a semiconductor device with an MOS transistor, wherein a gate electrode of the MOS transistor is provided as a stacked structure comprising a silicon layer 104, a metal silicide layer (col. 4, lines 25-29), a reaction barrier layer 102 (col. 3, lines 14-15), and a metallic layer 100 (col. 3, lines 52-54).

Claim 2 is rejected under the same rationale set forth above to claim 1.

Claim 3 is rejected under the same rationale set forth above to claim 1.

Claim 4 is rejected under the same rationale set forth above to claim 1..

Claim 17 is rejected under the same rationale set forth above to claim 1.

Claim 18 is rejected under the same rationale set forth above to claim 1.

Claim 19 is rejected under the same rationale set forth above to claim 1.

Claim 20 is rejected under the same rationale set forth above to claim 1.

Claim 21 is rejected under the same rationale set forth above to claim 1.

Claims 5-8 and 22-24 are rejected under 35 U. S. C. § 102 (e) as being anticipated by U.S. Patent No. 6,291,868 to Weimer et al.

Regarding to claim 5, Weimer discloses a semiconductor device with an MOS transistor whose gate electrode is provided as a stacked structure comprising a silicon layer 104 and a metallic layer 100 as the uppermost layer thereof, wherein a metal silicide layer (col. 4, lines 24-29) is provided on the silicon layer side and a reaction barrier layer 102 is provided under the metallic layer side between the silicon layer and the metallic layer as set forth in cols. 3 and 4, and fig.1.

Claim 22 is rejected under the same rationale set forth above to claim 5.

Claim 23 is rejected under the same rationale set forth above to claim 5.

Claim 24 is rejected under the same rationale set forth above to claim 5.

Claims 25-28 are rejected under 35 U. S. C. § 102 (e) as being anticipated by U.S. Patent No. 6,291,868 to Weimer et al.

Regarding to claim 25, Weimer discloses a semiconductor device with complementary MOS transistors, each MOS transistor having a gate electrode, a source region and a drain region, wherein the gate electrode is provided as a stacked structure comprising a silicon layer 104, a metal silicide layer (col. 4, lines 24-29), a reaction barrier layer 102 and a metallic layer 100, formed in that order beginning with the silicon layer as set forth in cols. 3, 4 and fig. 1.

Claim 26 is rejected under the same rationale set forth above to claim 25.

Claim 27 is rejected under the same rationale set forth above to claim 25.

Claim 28 is rejected under the same rationale set forth above to claim 25.

Claims 29-32 are rejected under 35 U. S. C. § 102 (e) as being anticipated by U.S. Patent No. 6,291,868 to Weimer et al.

Regarding to claim 29, Weimer discloses a semiconductor device with complementary MOS transistors, each MOS transistor having a gate electrode, a source region and a drain region, wherein the gate electrode is provided as a stacked structure comprising a silicon layer 104, an uppermost metallic layer 100, a metal silicide layer

(col. 4, lines 24-29) provided on the silicon layer side and a reaction barrier layer 102 provided under the metallic layer side 100 between the silicon layer and the metallic layer as set forth in cols. 3, 4 and fig.1.

Claim 30 is rejected under the same rationale set forth above to claim 29.

Claim 31 is rejected under the same rationale set forth above to claim 29.

Claim 32 is rejected under the same rationale set forth above to claim 29.

Claims 33-40 are rejected under 35 U. S. C. § 102 (e) as being anticipated by U.S. Patent No. 6,291,868 to Weimer et al.

Regarding to claim 33, Weimer discloses a semiconductor device comprising, on a substrate, at least one MOS transistor, wherein a gate electrode of the MOS transistor is provided as a stacked structure comprising a silicon layer 104, a metal silicide layer (col. 4, lines 24-29), a reaction barrier layer 102 and a metallic layer 100, formed in that order beginning with the silicon layer as set forth in cols. 3-4, and fig. 1.

Claim 34 is rejected under the same rationale set forth above to claim 33.

Claim 35 is rejected under the same rationale set forth above to claim 33.

Claim 36 is rejected under the same rationale set forth above to claim 33.

Claim 37 is rejected under the same rationale set forth above to claim 33.

Claim 38 is rejected under the same rationale set forth above to claim 33.

Art Unit: 2818

Claim 39 is rejected under the same rationale set forth above to claim 33.

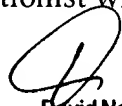
Claim 40 is rejected under the same rationale set forth above to claim 33.

### **Conclusion**

Any inquiry concerning this communication on earlier communications from the examiner should be directed to Mai-Huong Tran, (703) 305-1958. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM. The examiner's supervisor, David Nelms can be reached on (703) 308-4910.

The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
Mai-Huong Tran

  
David Nelms  
Supervisory Patent Examiner  
Technology Center 2800